

WHAT IS CLAIMED IS:

Sub B2
1. A print control method of an electrophotograph in an image formation apparatus including at least a photoconductor, a charger, a light exposure unit, and a developing device for forming a background area and an image area on the photoconductor using the charger and the light exposure unit and detecting a potential of the image area after transfer and controlling a developing electric field, thereby printing an electrophotograph, said method comprising the step of:

lowering percentage of the image area on the photoconductor when the potential is detected, the toner covering.

2. The print control method of an electrophotograph as claimed in claim 1 wherein when the potential is detected, carrier fly suppression control is performed.

3. The print control method of an electrophotograph as claimed in claim 2 wherein a middle potential is set between a latent image potential and a developing bias in addition to potentials of the background area and the image area; and

wherein the middle potential is used to control either or both of an edge part of a solid image area and a thin line.

4. The print control method of an electrophotograph as claimed in claim 3 wherein the middle potential is detected by a potential sensor.

Sub B3
5. The print control method of an electrophotograph

Sub B3
as claimed in claim 1, wherein when the potential is detected, avoidance control of the developing bias applied to the developing device is performed so as to lower the toner covering percentage on the photoconductor.

6. The print control method of an electrophotograph as claimed in claim 2 wherein when the potential is detected, avoidance control of the developing bias is performed after the detected potential passes through a developing nip width of the developing device in order to suppress the carrier fly.

7. The print control method of an electrophotograph as claimed in claim 1 wherein in the developing device having at least two or more developing rolls, developing biases are avoided in order starting at the upstream developing roll in a photoconductor rotation direction at developing bias avoiding timings.

Sub A1
8. The print control method of an electrophotograph as claimed in claim 7 wherein in the developing device having at least two or more developing rolls, the developing bias when the potential is detected is set to the developing bias as claimed in claim 5 and the developing bias avoiding timing is set to the timing as claimed in claim 6.

9. A print control method in an image formation apparatus of an electrophotograph comprising at least a photoconductor, a charger, a light exposure unit, and a developing device for forming a background area and an image

area on the photoconductor using the charger and the light exposure unit and detecting a potential of the image area after transfer, said method comprising the steps of:

setting a middle potential between a latent image potential and a developing bias; and

detecting a film thickness of the photoconductor to perform feedback control of the middle potential so that a developing electric field becomes constant based on the detected film thickness.

10. The print control method as claimed in claim 9 wherein a humidity sensor is placed in the image formation apparatus.

11. The print control method as claimed in claim 9 wherein a charge density of the photoconductor is counted to detect the film thickness of the photoconductor.

12. The print control method as claimed in claim 11 wherein a peripheral electric field of the image area is controlled based on the detection value of the film thickness.

13. The print control method as claimed in claim 11 wherein the image formation apparatus has a dark attenuation storage section storing the potential lowering amount caused by dark attenuation of the photoconductor previously grasped corresponding to the detection value of the film thickness of the photoconductor and a detection value of the humidity sensor.

14. The print control method as claimed in claim 13

wherein the potential detected after transfer is corrected according to the potential lowering amount based on the detection value of the humidity sensor and the detection value of the film thickness.

15. An image formation apparatus of an electrophotograph comprising:

a photoconductor;

a charger;

a light exposure unit;

a developing device for forming a background area and an image area on the photoconductor using the charger and the light exposure unit and detecting a potential of the image area after transfer and controlling a developing electric field; and

a toner covering percentage lowering unit adapted to lower the toner covering percentage of the image area on the photoconductor when the potential is detected.

16. The image formation apparatus of an electrophotograph as claimed in claim 15 further comprising a carrier fly suppression unit adapted to suppress carrier fly.

17. An image formation apparatus of an electrophotograph comprising:

a photoconductor;

a charger;

a light exposure unit;

a developing device for forming a background area and an image area on the photoconductor using the charger and the light exposure unit and detecting a potential of the image area after transfer;

a middle potential setting unit adapted to set a middle potential between a latent image potential and a developing bias; and

a middle potential controller adapted to detect a film thickness of the photoconductor and performing feedback control of the middle potential so that a developing electric field becomes constant based on the detected film thickness.